WHAT IS CLAIMED IS:

1. A process for thermally treating an article made from an alloy comprising

at least aluminum and copper, the process comprising:

solid solution heat treating the article;

quenching the article;

heating the article to a first temperature of from about 275 to about 340°F;

artificially aging the article at the first temperature for a duration of at least 30

10 minutes; and

15

20

artificially aging the article at a second temperature of from about 325 to about 380°F for a duration of from about 4 hours to about 36 hours, the second temperature being greater than the first temperature by at least 10°F.

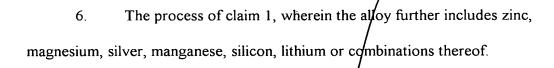
- 2. The process of claim 1 further including performing cold work to the article prior to the artificially aging at the first temperature.
 - 3. The product formed by the process of claim 1.
 - 4. The process of claim 1, wherein the alloy further includes lithium.
- 5. The process of claim 4, wherein the alloy further includes zinc, magnesium, silver, manganese, silicon, zirconium, chromium, vanadium, indium, iron, hafnium, ytrrium, lanthanides or combinations thereof.

5

10

15

20



- 7. The process of claim 6, wherein the alloy further includes zirconium, chromium, vanadium, indium, iron, hafnium, yttrium, lanthanides or combinations thereof.
- 8. The process of claim 1, wherein the alloy comprises from about 0.1 to about 10 wt.% copper.

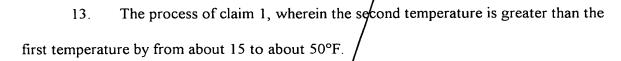
9. The process of claim 1, wherein the alloy comprises from about 1 to about 6.5 wt.% copper and from about 0.5 to about 3 wt.% lithium, with the balance aluminum and incidental elements and impurities.

10. The process of claim/1, wherein the alloy further comprises lithium, magnesium, silver and zirconium.

11. The process of claim 1, wherein the article is solid solution heat treated at a temperature from about 880 to about 1,030°F.

12. The process of claim 1, wherein the article is artificially aged at the first temperature for a duration of from about 6 hours to about 50 hours.

15



- 14. The process of claim 1, wherein the article is artificially aged at the first temperature of from about 310 to about 330°F for a duration of from about 12 to about 36 hours and the article is artificially aged at the second temperature of from about 340 to about 355°F for a duration of from about 4 to about 24 hours.
- 15. A process for improving strength to an article made from an alloy that has
 been hot deformed and fast cooled, the alloy comprising at least aluminum and copper,
 the process comprising:

heating the article to a first temperature of from about 275 to about 340°F; artificially aging the article at the first temperature for a duration of at least 30 minutes; and

artificially aging the article at a second temperature of from about 325 to about 380°F for a duration of from about 4 to about 36 hours, the second temperature being greater than the first temperature by at least 10°F.

5

15

- 16. The product formed by the process of claim 15.
- 17. The process of claim 15, wherein the alloy further includes lithium.
- 18. The process of claim 15, wherein the alloy comprises from about 0.1 to about 10 wt.% copper.
- 19. The process of claim 15, wherein the alloy comprises from about 1 to about 6.5 wt.% copper and from about 0/5 to about 3 wt.% lithium, with the balance aluminum and incidental elements and impurities.
 - 20. The process of claim 15, wherein the second temperature is greater than the first temperature by from about 1/5 to about 50°F.
 - The process of claim 15, wherein the article is artificially aged at the first temperature of from about 310 to about 330°F for a duration of from about 12 to about 36 hours and the article is artificially aged at the second temperature of from about 340 to about 355°F for a duration of from about 4 to about 24 hours.